

"The Hour-glass Caudices of the Bermuda Palmetto," by John W. Harshberger, Ph.D. (September 1).

"Delaware Valley Forms of Trachelomonas," by T. Chalkley Palmer (September 2).

"On a Collection of Birds and Mammals from the Colorado Delta, Lower California," by Witmer Stone, with field notes by S. N. Rhoads (September 18).

"New Land Mollusks of the Japanese Empire," by H. A. Pilsbry and Y. Hirase.

A paper entitled "Some Vertebrates of the Florida Keys," by Henry W. Fowler, was withdrawn by the author.

The following papers, by Mr. Clarence B. Moore, were accepted for publication in the JOURNAL, and will constitute the second part of the thirteenth volume, quarto series:

"Certain Aboriginal Mounds of the Tombigbee River."

"Certain Aboriginal Mounds of the Black Warrior River."

"Certain Aboriginal Mounds of Mobile Bay and of Mississippi Sound."

"Miscellaneous Investigations."

*The Identity of Eutania atrata* Kenn.—MR. ARTHUR ERWIN BROWN stated that in the *Report of the Pacific Railroad Survey* (1860) Kennicott described four garter snakes from California under the name of *Eutania atrata*. Two of his specimens are still in the United States National Museum, and a third is in the Academy's collection. In 1892 Professor Cope established *Eutania infernalis vidua* upon the two co-types of *E. atrata* in the National Museum, and subsequently marked the Academy's specimen with the same name. Cope's description was referred by Van Denburgh in 1897 to *E. elegans*, with the statement that this color-form seems to occur only on "the coast slope of the peninsula of San Francisco." In the same paper he cites *E. atrata* Kenn. as a probable synonym of *E. leptocephala* B. and G. In 1901 the speaker recognized the identity of Cope's types with those of Kennicott, and referred them to the highly variable *E. leptocephala*.

A collection of twenty or more living *E. elegans*, received by the Zoological Society from Santa Cruz county, just south of San Francisco, contains four examples of the *vidua* color-form. These correspond with the one type of *atrata* in the Academy's collection, and with the detailed description of the two in the National Museum with which Dr. Stejneger has kindly supplied me, the only difference of moment being that the four from Santa Cruz have nineteen rows of dorsal scales, while the types of *atrata* each have nineteen on the anterior third and seventeen on the middle of the body. It is significant that three red *elegans* from Santa Cruz show a parallel change from the normal number of twenty-one rows to nineteen, about the place where nineteen drops to seventeen in the *atrata* specimens. This scale variation is

quite within the range of *elegans*, which sometimes has nineteen, and occasionally seventeen rows; and as in the remaining details of scutellation, as well as in other characters distinctive of *elegans*, such as the yellow chin and throat, the usually short hinder chin-shields, and the frequent presence of red markings on the ventrals, there is complete agreement, it seems that these snakes must be regarded as specimens of *E. elegans*, showing a more or less uniform dark olive color with a wide yellow dorsal stripe and little or no indication of laterals, correlated with a tendency to a reduced number of scale rows, and occurring, as far as is known, in a restricted area. Such a form requires recognition as a subspecies, for which the proper name obviously is *Eutania elegans atrata* Kenn. Cope's name *E. infernalis vidua* being a pure synonym.

Anomalies such as these, occurring in some numbers and over a period of at least some generations, belong to the mutations of De Vries, but their proper assignment to any one of his special categories of the constituent parts of species is not so clear. It was pointed out on a previous occasion that *E. sirtalis*, with nineteen rows of scales, is probably the parent species of the genus, in which case the occasional appearance of that number in a species normally possessing twenty-one rows might be, in De Vries' view, an outbreak of a tendency to specific reversion to that number, and would fall under the definition of atavistic or degressive varieties; but, on the other hand, it is difficult to show, and would indeed be impossible when there is no knowledge of the line of descent, that the case may be no more than individual loss of two rows, a view to which color is lent by the further reduction in three specimens to seventeen rows. This mode of change would class them as retrogressive varieties. And again, the gain of a new color-pattern, occurring nowhere in a possibly ancestral form, brings them within the definition of elementary species. In fact, these specimens seem to demonstrate the lack of value of these theoretical definitions to the practical work of the systematist.

The evidence for the evolutionary value of mutations being so scanty among animals, it is not amiss to direct attention to the instability of nearly the whole genus *Eutania*, and especially the species of the Pacific coast. This condition suggests that if the theory of alternating periods of stability and mutation be well founded, this group of species may at the present time be passing through a period of extreme mutability.

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OCTOBER 17.

The President, SAMUEL G. DIXON M.D., in the Chair.

Forty-two persons present.

The death of Sutherland M. Prevost, a member, September 30, 1905, was announced.